Testimony of
Keith Calhoun-Senghor
Director, Office of Space Commercialization
Technology Administration
U.S. Department of Commerce

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Mr. Chairman, I am pleased to be here to represent the Department of Commerce and to discuss the important subject of the competitiveness of the U.S. commercial space transportation industry.

I believe that the economic significance of a reliable, robust and competitive commercial space industry to this country's future cannot be overstated. Space is the next commercial frontier. Therefore, reliable, affordable access to space is a fundamental prerequisite if we are to realize the full potential of that frontier.

As you already know, according to some estimates, the next 10 years will see the development and launch of almost 1,700 satellites worldwide, with commercial satellites contributing over 70 percent of this total. The satellite industry estimates that the worldwide commercial satellite business already represents a $44 billion industry, providing over 150,000 high-wage, high-tech jobs. Roughly half of those revenues and jobs are in the United States. Annual growth in this area was over 14% in 1997 and is projected to remain strong as the global demand for satellite services expands.

Today, virtually all of the demand for commercial launchers is driven by the telecommunications and broadcasting industry. That industry has witnessed a surge in proposed commercial satellite constellations designed to satisfy the growing global hunger for sophisticated information products and services. Such constellations—Iridium, Globalstar, Teledesic, and ICO Global to name a few—entail the launching of a number of satellites unheard of just a few years ago.

In the next few years, we expect the commercial space industry to expand beyond its current telecommunications base into a wider spectrum of satellite-based information products and services. These will include high resolution satellite imagery, precise positioning, navigation, and timing applications using the Global Positioning System (GPS), and satellite-derived Geographic Information System (GIS) products.

For example, the worldwide market for GPS goods and services is expected to

double to $8 billion within two years and quadruple to $16 billion by 2003. The commercial remote sensing satellite market is projected to reach approximately $1 billion by the year 2000.

The increased demand for satellite based services will drive demand for space transportation dramatically, from only nine commercial launches in 1993 to as many as 85 in 2002. Last year, excluding the Space Shuttle, the number of commercial launches from the United States exceeded the number of government and military missions.

Looking farther into the next century, we will see more traditional industries making the move into space—industries such as rapid package delivery, public travel and tourism, manufacturing and processing, mineral exploration and mining, and power generation. We also expect the development of businesses not yet imagined.

However, the economic viability of all of these space-related industries is tied directly to the availability of affordable, robust, and reliable launch vehicles. In other words, any vision of our economic future in space is dependent on space transportation as a key to our overall technology strategy.

However, in the past weeks, there have been several high profile launch failures, and widespread reporting on these failures has led to the logical question: why, and what can be done about it?

This is a very important question to ask because access to space is critical not only to our long term vision of future economic growth but also to our near term economic competitiveness. Other countries, including Japan, Israel, Brazil and India, see the growth potential and are looking to enter the market with their own commercial launch vehicles. Questions of foreign subsidies and unfair competition are often raised by industry. In an increasingly competitive world, the U.S. launch industry cannot afford to fall behind.

As our Deputy Secretary of Commerce, Robert Mallett, has often pointed out, there is a clear connection between our economic security and our national security when it comes to commercial space launch vehicles. Improving the price, performance, reliability and schedule availability of our domestic space access capabilities would address some -- but not all -- of the reasons that U.S. companies export satellites to China, Russia, and other countries for launch on foreign vehicles. It would also improve our nation’s ability to send critical national security assets into space.

The President’s National Space Transportation Policy recognizes these important concerns and offers the framework for how to address them in a balanced and effective manner.

Among other things, the policy requires the Departments of Commerce and

Transportation to explore innovative ways to enhance the international competitiveness of our space transportation industry. This includes fostering the development of commercial spaceports such as those in Florida, California, Alaska, Virginia, and New Mexico. The policy also outlines the roles of NASA and the Department of Defense in the development of next generation Reusable Launch Vehicles (RLVs) and Expendable Launch Vehicles (ELVs).

As a result of the Administration's efforts in this area, and through the negotiation of space launch trade agreements with China, Russia, and Ukraine, U.S. launch providers have regained their world leadership in the commercial space transportation business, capturing 47 percent of the world's commercial launches and 56 percent of commercial payloads launched in 1998. However, there is more that we can do.

First, we must continue to make significant investments in research and development to reduce the technical risk of new space transportation technologies. Under the President's policy, NASA and the Department of Defense are working in partnership with industry to develop new technologies and systems that will enable the development of our next generation space transportation systems. We at the Commerce Department have played a role in both of these innovative programs; we view our inclusion as a sign that both NASA and the Defense Department fully understand the economic importance of commercial space transportation to our nation's future and to their own programs and technology development efforts.

Second, our office is working with industry and this Committee to explore innovative new ways to develop a business climate that encourages private sector investment in new space transportation systems. We should explore together the concepts of tax incentives, advance purchase agreements, cooperative R&D, and any number of other alternatives. We can also improve the overall investment climate for launch services through appropriate indemnification, policy stability, regulatory streamlining and predictable certification.

Moreover, the Department of Commerce has been engaged in a number of specific efforts related to improving the competitiveness of the commercial space transportation industry, including:

- An ongoing dialogue with industry involving senior Department officials, including the Deputy Secretary and acting Under Secretary for Technology, through government-industry roundtables on launch incentives, commercial space transportation and spaceport issues;

- The collection, analysis, and dissemination of statistical information about the commercial space market and the space transportation industry through the Office of Space Commercialization, as well as through the International Trade Administration's annual *U.S. Industrial and Trade Outlook*;

- Ongoing coordination with NASA, the Department of Defense, and the Department of Transportation on space transportation policy issues and the investigation of possible incentives for commercial industry;

- Continued monitoring of the space launch trade agreements with Russia, China, and Ukraine, and ensuring the interests of the launch industry are protected in any transition plan;

- Discussions with state and local officials involved in space transportation issues through our U.S. Innovation Partnership program; and

- A coordinated outreach effort by our Office of Space Commercialization to encourage U.S. Government agencies to apply commercial space technologies to improve the efficiency of their everyday business operations, thus stimulating government demand for the purchase of commercial space goods and services.

Mr. Chairman, I believe we are capable of developing an affordable, reliable space transportation system that will enable continued growth in the commercial space market well into the next century. Our economic future depends on making transportation to space affordable, accessible, and safe. The Department of Commerce is committed to working with this committee to achieve that goal.

Thank you. I look forward to answering any questions you may have.